AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior listing of claims in this application.

Claims 1-29 (canceled).

30. (currently amended) A method of forming a polarization hologram, comprising:

applying an organic polymer material to a surface of a transparent substrate;

drying said substrate and removing said organic polymer material from said substrate; and

heating and stretching said organic polymer material to form a uni-directionally stretched birefringence layer, wherein said uni-directionally stretched birefringence layer is provided on ~~said~~ a substrate in a periodic grating pattern and wherein said uni-directionally stretched birefringence layer has different refractive indexes for two orthogonal polarizing directions of a reflection beam, the polarization hologram diffracting the reflection beam in predetermined diffracting directions depending on the wavelength of an incident ~~reflection~~ beam.

31. (previously presented) The method of claim 30, further comprising forming an isotropic overcoat layer therein to enclose said birefringence layer.

32. (currently amended) The method of claim 30, wherein said organic polymer material is selected from ~~among~~ the group consisting of polycarbonate, polyvinylalcohol, polymethylmethacrylate, polystyrene, polysulfone, polyethylsulfone and polyimide.

33. (previously presented) The method of claim 30, wherein the birefringence layer of the polarization hologram is configured with a heated and stretched polyimide film.

34. (previously presented) The method of claim 33, wherein said polyimide film is prepared by applying a polyamide acid solution with a dimethylalcohol solvent to said substrate.

35. (previously presented) The method of claim 30, wherein said heating is performed at a temperature of 350°C.

36. (previously presented) The method of claim 30, wherein said stretching of said organic polymer material comprises stretching said organic polymer material in one direction.

37. (previously presented) The method of claim 36, wherein a refractive index for said organic polymer material in said one direction of stretching is about 1.62.

38. (previously presented) The method of claim 36, wherein the refractive index for said organic polymer material in a direction perpendicular to said one direction of stretching is about 1.49.

39. (previously presented) The method of claim 38, wherein the difference between the refractive index for said organic polymer material stretched in said one direction and said direction perpendicular to said one direction is 0.13.

40. (previously presented) The method of claim 30, wherein the polarization hologram is configured to substantially satisfy the following requirements

$(np-n1)h=mL$

$(ns-n1)h=(m\pm\frac{1}{2})L$

where np is a refractive index of the birefringence layer for a p-polarized light of the reflection beam, ns is a refractive index of the birefringence layer for an s-polarized light of the reflection beam, n1 is a refractive index of an isotropic overcoat layer, h is a depth of the periodic grating pattern, L is a wavelength of the reflection beam, and m is an integer (m=0, ±1, ±2, ...).

41. (previously presented) The method of claim 30, wherein the polarization hologram is configured to substantially satisfy the following requirements

$(np-n1)h= (m\pm\frac{1}{2})L$

$(ns-n1)h= mL$

where np is a refractive index of the birefringence layer for a p-polarized light of the reflection beam, ns is a refractive index of the birefringence layer for an s-polarized light of the reflection beam, n1 is a refractive index of an isotropic overcoat layer, h is a depth of the periodic grating pattern, L is a wavelength of the reflection beam, and m is an integer (m=0, ±1, ±2, ...).

42. (previously presented) The method of claim 30, wherein said applying step includes pin coating.

43. (currently amended) A polarization hologram comprising:

a transparent substrate; and

a uni-directionally stretched birefringence layer of a stretched organic polymer material provided on the transparent substrate in a periodic grating pattern,

the uni-directionally stretched birefringence layer having different refractive indexes for two orthogonal polarizing directions of a reflection beam.

44. (currently amended) The polarization hologram of claim 43, further comprising an isotropic overcoat layer provided to enclose the birefringence layer therein, the polarization hologram diffracting the reflection beam in predetermined diffracting directions depending on the wavelength of an incident ~~reflection~~ beam.

45. (previously presented) The polarization hologram of claim 43, wherein the birefringence layer has a thickness greater than a depth of the periodic grating pattern of the birefringence layer, and further comprises an isotropic overcoat layer, wherein said isotropic overcoat layer is not in contact with the transparent substrate.

46. (previously presented) The polarization hologram of claim 45, wherein said polarization hologram comprises a second transparent substrate provided on the isotropic overcoat layer to cover the birefringence layer, and the isotropic overcoat layer being an isotropic resin adhesion layer, and the second transparent substrate being fixed to the birefringence layer by using the isotropic resin adhesion layer.

47. (currently amended) The polarization hologram of claim 43, wherein the stretching of the organic polymer material creates a difference between the refractive indexes of the birefringence layer for two orthogonal polarizing directions of an incident ~~reflection~~ beam.